DETAILED ACTION

This application has been examined. Claims 1, 4-6, 8-15, 18-26, 39-42, 45,47-57

are pending. Claims 2, 3, 7,16-17, 27-38, 43,44,46 are cancelled.

The Examiner respectfully requests Applicant to clarify claim status regarding the

pending claims 25-26.

Making Final

Applicant's arguments filed 08/10/2010 have been fully considered but they are

not persuasive.

The Examiner is maintaining the rejection(s) using the same grounds for

rejection and thus making this action FINAL.

Priority

The effective date of the claims described in this application is February 1, 2000.

Response to Arguments

Applicant's arguments filed 08/10/2010 have been considered but are not

persuasive.

The Examiner notes that the Applicant Remarks are substantially similar to previous Applicant Remarks and thus the Examiner maintains the same comments regarding previously filed Applicant Remarks, as shown in the prior Office Action.

The Applicant presents the following argument(s) [*in italics*]:

… Tadokoro's job order user interface merely allows one to place a job order, as Tadokoro teaches that jobs must be manually initiated and later confirmed as complete. Therefore, Tadokoro's job order user interface also is not capable of initiating processing on a tool.

The Examiner respectfully disagrees with the Applicant.

Rangachari disclosed a user interface that a user manipulates for automated control of the devices (Rangachari- Column 9 Lines 33-40, Column 10 Lines 35-60) via the Internet (Rangachari-Column 6 Lines 20-25).

The Applicant presents the following argument(s) [*in italics*]:

Applicant respectfully submits that there is insufficient motivation to combine the teachings of Tadokoro with those of Rangachari …[because none of the issues] cited by Tadokoro is neglected by Rangachari.

The Examiner respectfully disagrees with the Applicant.

The Applicant remarks appear to indicate that Tadokoro and Rangachari have overlapping disclosures regarding distributed software components and monitoring capability for extensive equipment monitoring and control. It would have been obvious

to a person of ordinary skill in the networking art that the teachings of Tadokoro and

Rangachari are highly suitable for combination and desirable for the improvements

indicated in the Office Action.

The Applicant presents the following argument(s) [*in italics*]:

[the prior art by Tadokoro does not disclose] *upon receipt of the event report,*

sending a message to the tool acknowledging the receipt of the event report…

Arackaparambil disclosed wherein a VWC (visual workflow component) defines

and executes manufacturing processes and is capable of executing predetermined

business processes. VWC defines business processes graphically as a

sequence/network of service invocations. The VWC is used with a novel combination of

a TIP (tool interface program) and a novel TIC adapter. TIP is provided for each

machine or tool type to translate VFEI commands or messages to an interface, such as

SECS, of a machine and its controls such as control SW.

Arackaparambil Figure 10 Column 14 Lines 55-65 disclosed that when the

requested event occurs on the equipment, a report concerning the event is

communicated 626 from TIP instance 614 to TIC adapter 612, which then checks to

determine if there is a pending report request. When there is a pending report request,

such as request 622, TIC adapter 612 delivers the requested report 628 to the VWC WF

and acknowledges delivery 630 of the event report to TIP instance 614.

Thus Arackaparambil disclosed (re. Claim 1) *upon receipt of the event report,*

sending a message to the tool acknowledging the receipt of the event report.

(Arackaparambil- Figure 10 Column 14 Lines 55-65, *TIC adapter 612 delivers the*

requested report 628 to the VWC WF and acknowledges delivery 630 of the event

report to TIP instance 614. The Examiner notes that where the TIP instance is

representing the tool machine then Arackaparambil disclosed sending the

acknowledgment message to the tool.

        The Applicant presents the following argument(s) [*in italics*]:

        The Haverstock reference does not teach the claimed object and function fields

of the Applicant's claimed URL… Haverstock discloses…actions identified in the URL

which are performed on the retrieved virtual object. However…the claimed object and

function fields of the Applicant's claimed URL identify a tool and cause initiation of

processing. Thus, Haverstock does not teach the object and function fields of the

Applicant's claimed URL.

        The Examiner respectfully disagrees with the Applicant.

        The Examiner notes that in the claimed invention the tool is invoked via object

models that represent the tool. The object model in the claimed invention is equivalent

to the virtual object by Haverstock. Thus the Examiner does not detect any distinction

between the claimed invention and the prior art with respect to this limitation.

        The Applicant presents the following argument(s) [*in italics*]:

        [the prior art does not disclose] *invoking a remote processing control method, the*

remote processing control method performing the method operations of sending the first

message to the tool, awaiting the initiate processing acknowledge, and awaiting the

event report.

The Examiner respectfully disagrees with the Applicant.

Tenney Column 6 Lines 40-55 disclosed remote method invocation (RMI) for
transmitting control information between device and machines used in the
semiconductor industry.

Thus Rangachari-Tadokoro-Tenney-Haverstock-Arackaparambil disclosed (re.
Claim 55,56) *invoking a remote processing control method. (*Tenney- Column 6 Lines
40-55 disclosed *remote method invocation (RMI) for transmitting control information*
between device and machines used in the semiconductor industry) *the remote*
processing control method performing the method operations of sending the first
message to the tool, awaiting the initiate processing acknowledge, and awaiting the
event report. (Tadokoro-Column 18 Lines 20 Lines 20-25,'*request status of virtual*
machine component', Column 19 Lines 50-55, ' *VM responds with status indicating*
completion')

The Examiner notes that the process of requesting status and receiving status
from the tool device is equivalent to *awaiting an initiate processing acknowledge from*
the tool and awaiting an event report from the tool indicating completion of the action.

The Examiner notes that Tadokoro, Tenney and Arackaparambil have
overlapping disclosures regarding invoking a remote processing control method.

Arackaparambil disclosed wherein a VWC (visual workflow component) defines and executes manufacturing processes and is capable of executing predetermined business processes. VWC defines business processes graphically as a sequence/network of service invocations. Arackaparambil Column 11 Lines 10-15 disclosed wherein the VWC process definition capability includes the exchange of data between service invocations and control structures to determine/select the path(s) through predefined business processes. VWC is adapted for executing business processes autonomously, i.e. functioning independently of other SW components, and is capable of responding to automated inputs as well as to user inputs. The VWC is used with a novel combination of a TIP (tool interface program) and a novel TIC adapter. TIP is provided for each machine or tool type to translate VFEI commands or messages to an interface, such as SECS, of a machine and its controls such as control SW (Software) components. Arackaparambil Column 13 Lines 25-35, Column 14 Lines 5-10 provides a novel VFEI+ on DCOM protocol wherein VFEI+ will include enhancements for administration, for modeling and for the RPC (remote procedure call) nature of DCOM. It is contemplated to distribute TIP on several computers, for example where these computers are utilized in computer integrated wafer fab tools employing TIP software.

The SW code/logic is provided in the component server, such as EMC or WMC software component servers.

The Examiner notes that Arackaparambil disclosed invoking software

components located on remote servers for communicating commands to remote tool

interfaces wherein the service requests are based on DCOM Remote Procedure Call

(RPC) stye, which is equivalent to a *remote processing control method*.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 4-6, 8-11,15, 18-24, 39-42, 45,47-48,55-56 are rejected under 35

U.S.C. 103(a) as being unpatentable over Rangachari et al. (US Patent 6470227), in

view of Tadokoro et al. (US 6463352), further in view of Tenney et al. (US Patent

6944584) further in view of Haverstock (US Patent 6192415) further in view of

Arackaparambil (US Patent 7069101).

Rangachari disclosed (re. Claim 1) receiving a first request from the remote client

system via the network; (see Rangachari, Col. 8, lines 43-46, Col. 9, lines 22-42, Col.

10, lines 45-51)

determining a function to be performed (see Rangachari, Col. 10, lines 52-64,

Column 14 Lines 25-35) based at least in part on a first predetermined field contained in

said first request; and

sending a first message to the tool in response to said first request and said first

type, wherein said first message is operable for controlling an action of said tool (see

Rangachari, Col. 6, lines 26-51, Col. 7, lines 20-24 and Col. 8, lines 17-20)

However Rangachari did not disclose (re. Claim 1) using a first predetermined

field in a portion of said first request.

While Rangachari disclosed a user interface that a user manipulates for

automated control of the devices (Rangachari- Column 9 Lines 33-40, Column 10 Lines

35-60) via the Internet (Rangachari-Column 6 Lines 20-25),   Rangachari did not

disclose utilizing a Web browser.

Rangachari did not disclose (re. claim 1) a uniform resource locator path

including a function field and an object field and determining a function to be performed

based on said function field in said uniform resource locator path.

Rangachari did not disclose (re. Claim 1) the object field and the function field

identifying a tool object model for an identified tool, the tool object model providing a

logical description for use in an automatic control environment of the factory and

associated with the plurality of tools; wherein the logical description provided by the tool

object model enables the control of the action and determination of physical parameters

of the identified tool to determine when to initiate the action.

Rangachari did not disclose (re. Claim 1) awaiting an initiate processing acknowledge from the tool; upon receipt of said initiate processing acknowledge from the tool, awaiting an event report from the tool indicating completion of the action.

Tadokoro disclosed (re. Claim 1) using a first predetermined field in a portion of said first request.   See Tadokoro, Col. 10, lines 1-25.

Tadokoro disclosed (re. Claim 1) disclosed (re. Claim 1) the object field and the function field identifying a tool object model for an identified tool, (Tadokoro -Column 4 Lines 45-65) the tool object model providing a logical description for use in an automatic control environment of the factory and associated with the plurality of tools; wherein the logical description provided by the tool object model enables the control of the action (Tadokoro -Column 4 Lines 45-65, Column 19 Lines 5-15) and determination of physical parameters of the identified tool to determine when to initiate the action. (Tadokoro -Column 4 Lines 45-65, Column 26 Lines 45-65)

Tadokoro disclosed (re. Claim 1) awaiting an initiate processing acknowledge from the tool; upon receipt of said initiate processing acknowledge from the tool, awaiting an event report from the tool indicating completion of the action. (Tadokoro- Column 18 Lines 20 Lines 20-25,'request status of virtual machine component', Column 19 Lines 50-55, ' VM responds with status indicating completion')

Rangachari and Tadokoro are analogous art because they present concepts and practices regarding distributed software components for controlling machines remotely via a network.   It would have been obvious to one of ordinary skill in the networking art at the time the invention was made to have incorporated Tadokoro's teachings of a

system for controlling software components for machines in a distributed manner with
the teachings of Rangachari, for the purpose of improving workflow efficiency of a
system by better monitoring processes, thereby preventing bottlenecks (see Tadokoro,
Col. 2, lines 10-25).

     Tenney disclosed (re. Claim 1) using a Web browser for controlling motions of
devices. (Tenney-Column 6 Lines 55-65)

     Haverstock disclosed (re. Claim 1) a server to respond to a <u>URL requests
containing action commands</u> from a browser. <u>Action commands and additional
arguments are input into the URL</u>. The server receives the request for the <u>URL and
processes the actions and arguments identified in the URL</u>. (Haverstock-Column 3
Lines 10-20, Column 5 Lines 20-35) Thus Haverstock disclosed (re. Claim 1) a uniform
resource locator path including a function field and an object field and determining a
function to be performed based on said function field in said uniform resource locator
path.

     Rangachari, Tadokoro, Tenney, and Haverstock are analogous art because they
present concepts and practices regarding distributed software components for
controlling machines remotely via a network.   It would have been obvious to one of
ordinary skill in the networking art at the time the invention was made to have
incorporated Tenney's teachings of a system for controlling software components for
machines in a distributed manner with the teachings of Rangachari-Tadokoro, for the
purpose of using non-proprietary network protocols for simplified network

communications (Tenney-Column 2 Lines 10-15). Similarly it would have been obvious

to one of ordinary skill in the networking art at the time the invention was made to have

incorporated Haverstock's teachings of a URL with action commands into Rangachari-

Tadokoro-Tenney-Haverstock for the purpose of <u>allowing system users to retrieve</u>

<u>objects and identify actions</u> with a single input command without requiring programming

code. (Haverstock-Column 5 Lines 40-45)

      While Rangachari-Tadokoro-Tenney-Haverstock substantially disclosed the

claimed invention Rangachari-Tadokoro-Tenney-Haverstock does not disclose (re.

Claim 1) wherein *upon receipt of the event report, sending a message to the tool*

acknowledging the receipt of the event report.

      Arackaparambil disclosed wherein a VWC (visual workflow component) defines

and executes manufacturing processes and is capable of executing predetermined

business processes. VWC defines business processes graphically as a

sequence/network of service invocations. The VWC is used with a novel combination of

a TIP (tool interface program) and a novel TIC adapter. TIP is provided for each

machine or tool type to translate VFEI commands or messages to an interface, such as

SECS, of a machine and its controls such as control SW.

      Arackaparambil Figure 10 Column 14 Lines 55-65 disclosed that when the

requested event occurs on the equipment, a report concerning the event is

communicated 626 from TIP instance 614 to TIC adapter 612, which then checks to

determine if there is a pending report request. When there is a pending report request,

such as request 622, TIC adapter 612 delivers the requested report 628 to the VWC WF and acknowledges delivery 630 of the event report to TIP instance 614.

Thus Arackaparambil disclosed (re. Claim 1) *upon receipt of the event report, sending a message to the tool acknowledging the receipt of the event report.* (Arackaparambil- Figure 10 Column 14 Lines 55-65, TIC adapter 612 delivers the requested report 628 to the VWC WF and acknowledges delivery 630 of the event report to TIP instance 614. The Examiner notes that where the TIP instance is representing the tool machine then Arackaparambil disclosed sending the acknowledgment message to the tool.)

Rangachari, Tadokoro, Tenney,Haverstock and Arackaparambil are analogous art because they present concepts and practices regarding distributed software components for controlling machines remotely via a network. It would have been obvious to one of ordinary skill in the networking art at the time the invention was made to have incorporated Arackaparambil's teachings into Rangachari-Tadokoro-Tenney-Haverstock. The motivation for said combination would have been to enable the inventive TIC adapter by Arackaparambil that is capable of simultaneously managing messages from many DFS/F components and many TIP instances and is capable of saving pending event requests, i.e. the instruction to a TIP regarding a request that a tool should report a particular status or operating event.

Rangachari-Tadokoro-Tenney-Haverstock-Arackaparambil disclosed (re. Claim 4) wherein said tools return at least one second message associated with said first action, said method further comprising the step of caching said at least one second

message (see Rangachari, Col. 13, lines 50-64, Column 15 Lines 10 and Tadokoro,

Col. 13, lines 12-28).

The motivation to combine described in Claim 1 applies to Claim 4.

Rangachari-Tadokoro-Tenney-Haverstock-Arackaparambil disclosed (re. Claim

5)   receiving a second request and generating a response to the second request using

said second message (Rangachari teaches that methods are invoked between

application objects and servers to perform specific tasks outlined within a message),

(see Rangachari, Col. 10, lines 52-64, Figure 1J).

The motivation to combine described in Claim 1 applies to Claim 5.

Rangachari-Tadokoro-Tenney-Haverstock-Arackaparambil disclosed (re. Claim

6)   the step of sending said response to a client system initiating said first and second

requests (Rangachari teaches that the client is notified of the completion of a task along

with any attributes that are need), see Rangachari, Col. 10, lines 64-67, Col. 11, lines 1-

3.

The motivation to combine described in Claim 1 applies to Claim 6.

Rangachari-Tadokoro-Tenney-Haverstock-Arackaparambil disclosed (re. Claim

8) receiving a connection request and opening a connection to a client, said connection

being operable for communicating requests and responses to said requests (Tadokoro

teaches HTTP requests), (see Tadokoro, Col. 12, lines 43-45).

The motivation to combine described in Claim 1 applies to Claim 8.

Rangachari-Tadokoro-Tenney-Haverstock-Arackaparambil disclosed (re. Claim

9)   receiving a second request from said client system via said network (see rejection

of claim 1 , supra), said second request selected from the group consisting of

information requests, expand requests and edit requests (see Tadokoro, Figures 10-

14), wherein, in response to said information requests, an HTML page is generated

using a set of selected data for a tool object corresponding to a managed tool for

sending to said client system, as well as in response to said edit requests, an HTML

page is generated having a portion operable for user entry of one or more values for

modifying a tool object attribute for sending to said client system and in response to said

expand request an HTML page is generated using a set of child object names and

relations to a parent object identified in said expand request for sending to said client

(Tadokoro, Col. 8, lines 10-37, Col. 9, lines 1-9, Col. 12, lines 21-44).

 The motivation to combine described in Claim 1 applies to Claim 9.

 Rangachari-Tadokoro-Tenney-Haverstock-Arackaparambil disclosed (re. Claim

10) wherein said first request denotes an execute request (see Rangachari, Col. 10,

lines 52-64).

 The motivation to combine described in Claim 1 applies to Claim 10.

 Rangachari-Tadokoro-Tenney-Haverstock-Arackaparambil disclosed (re. Claim

11) the limitations of these claims are substantially the same as that of claim 1 , and

thus are rejected for the same rationale in rejecting those claims.

 Rangachari-Tadokoro-Tenney-Haverstock-Arackaparambil disclosed (re. Claim

14) wherein said first request is transferred in accordance with the hypertext transfer

protocol (HTTP), and said portion corresponds to a uniform resource locator (see

Tadokoro, Col. 10, lines 1-47).

The motivation to combine described in Claim 1 applies to Claim 14.

Claims 15, 18-24, 41-42, and 45 present a data processing system with the same

limitations as Claims 1, 4-6, 8-11, and 39-40.

Claims 15, 18-24, 41-42, and 45 are rejected on the same basis as Claims 1, 4-

6, 8-11, and 39-40.

The motivation to combine described in Claim 1 applies to Claim 15, 18-24, 41-

42, and 45.

Rangachari-Tadokoro-Tenney-Haverstock-Arackaparambil disclosed (re. Claim

47,48)   wherein said first network and said second network utilize the same local area

network. (Tenney-Figure 9 Column 11 Lines 5-25)

The motivation to combine described in Claim 1 applies to Claims 47,48.

Tenney Column 6 Lines 40-55 disclosed remote method invocation (RMI) for

transmitting control information between device and machines used in the

semiconductor industry.

Thus Rangachari-Tadokoro-Tenney-Haverstock-Arackaparambil disclosed (re.

Claim 55,56) *invoking a remote processing control method. (*Tenney- Column 6 Lines

40-55 disclosed remote method invocation (RMI) for transmitting control information

between device and machines used in the semiconductor industry.) *the remote*

processing control method performing the method operations of sending the first

message to the tool, awaiting the initiate processing acknowledge, and awaiting the

event report. (Tadokoro-Column 18 Lines 20 Lines 20-25, *'request status of virtual*

machine component', Column 19 Lines 50-55, ' *VM responds with status indicating*

completion')

The Examiner notes that the process of requesting status and receiving status

from the tool device is equivalent to *awaiting an initiate processing acknowledge from*

the tool and awaiting an event report from the tool indicating completion of the action.

The Examiner notes that Tadokoro, Tenney and Arackaparambil have

overlapping disclosures regarding invoking a remote processing control method.

Arackaparambil disclosed wherein a VWC (visual workflow component) defines

and executes manufacturing processes and is capable of executing predetermined

business processes. VWC defines business processes graphically as a

sequence/network of service invocations. Arackaparambil Column 11 Lines 10-15

disclosed wherein the VWC process definition capability includes the exchange of data

between service invocations and control structures to determine/select the path(s)

through predefined business processes. VWC is adapted for executing business

processes autonomously, i.e. functioning independently of other SW components, and

is capable of responding to automated inputs as well as to user inputs. The VWC is

used with a novel combination of a TIP (tool interface program) and a novel TIC

adapter. TIP is provided for each machine or tool type to translate VFEI commands or

messages to an interface, such as SECS, of a machine and its controls such as control

SW (Software) components. Arackaparambil Column 13 Lines 25-35, Column 14

Lines 5-10 provides a novel VFEI+ on DCOM protocol wherein VFEI+ will include

enhancements for administration, for modeling and for the RPC (remote procedure call)

nature of DCOM. It is contemplated to distribute TIP on several computers, for example

where these computers are utilized in computer integrated wafer fab tools employing

TIP software.

      The SW code/logic is provided in the component server, such as EMC or WMC

software component servers.

      The Examiner notes that Arackaparambil disclosed invoking software

components located on remote servers for communicating commands to remote tool

interfaces wherein the service requests are based on DCOM Remote Procedure Call

(RPC) stye, which is equivalent to a *remote processing control method*.

Claim Rejections - 35 USC § 103

      The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

      Claims 12-13, 25-26, 49-54,57 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Rangachari et al. (US Patent 6470227), in view of Tadokoro et al.

(US 6463352), further in view of Tenney et al. (US Patent 6944584) further in view of

Haverstock (US Patent 6192415) further in view of Arackaparambil (US Patent

7069101) further in view of Nilsen (US Patent 6081665).

Rangachari-Tadokoro-Tenney-Haverstock-Arackaparambil disclosed (re. Claim

12-13,25-26,49-50,52-53,57) the limitations of these claims that are substantially the

same as that of claim 1.

The Examiner notes that Rangachari Column 9 Lines 30-35 disclosed modifying

fabrication workflows using scripts. Tenney Column 10 Lines 45-55 disclosed

controlling machines using JavaScript and new robot control programs developed by

the user and further described remote method invocation protocols. Tenney strongly

suggests overriding existing control programs with user-designed programs. Thus the

combined disclosures of Rangachari-Tadokoro-Tenney-Haverstock-Arackaparambil

would lead a person of ordinary skill in the art to look for details regarding method

invocation protocols.

However Rangachari-Tadokoro-Tenney-Haverstock-Arackaparambil did not

disclose (re. Claims 12-13,25-26,49-50,52-53,57) overriding said tool object method

by of parsing a script, determining if said script source includes a method signature

matching a method signature of said tool object method, and if so, executing a

corresponding portion of said script. Rangachari-Tadokoro-Tenney-Haverstock-

Arackaparambil did not disclose (re. Claims 12-13,49-50,52-53,57) indicating that the default method has been overridden in an override registry list.

Nilsen disclosed (re. Claims 12-13,25-26,49-50,52-53,57) overriding said tool object method by of parsing a script, determining if said script source includes a method signature matching a method signature of said tool object method, and if so, executing a corresponding portion of said script. Rangachari-Tadokoro-Tenney-Haverstock-Arackaparambil did not disclose (re. Claims 12-13,49-50,52-53,57) indicating that the default method has been overridden in an override registry list.

Nilsen Column 14 Lines 25-35 disclosed matching method signatures in order to find the method being invoked. Furthermore Nilsen method invocation protocols disclosed checking pointers to a method's data structures (Column 13 Lines 35-45) in order to check for which version of the method is being requested to run.

Nilsen notes that while Nilsen did not mention parsing it would have been well-known in the software development art to parse the received method invocation request for the method name and arguments being requested.

The Examiner notes that the pointers are values in a computer register memory (Nilsen-Column 4 Lines 50-55) and the modifications to said pointers are the equivalent of an changing an indicator on an override registry list.

At the time of the invention it would have been obvious to combine the disclosures of Nilsen into Rangachari-Tadokoro-Tenney-Haverstock-Arackaparambil for the purpose of implementing user-customized control programs in real-time web applications such as robotics (see Nilsen-Column 2 Lines 30-45). The motivation for said combination would have been to enable a virtual machine execution model that eliminates the need for complication cross-compiler development systems, multiple platform version maintenance, and extensive rewriting and retesting each time the software is ported to a new host processor.

Rangachari-Tadokoro-Tenney-Haverstock- Arackaparambil -Nilsen disclosed (re. Claims 51,54) wherein the signature is selected from the group consisting of a name, a return type, and a set of arguments. (Nilsen- Column 16 Lines 20-35)

Conclusion

Examiner's Note: Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part

of the claimed invention, as well as the context of the passage as taught by the prior art
or disclosed by the Examiner.

In the case of amending the claimed invention, Applicant is respectfully
requested to indicate the portion(s) of the specification which dictate(s) the structure
relied on for proper interpretation and also to verify and ascertain the metes and bounds
of the claimed invention.

The prior art made of record and not relied upon is considered pertinent to
applicant's disclosure. Please refer to the enclosed PTO-289 form.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time
policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE
MONTHS from the mailing date of this action. In the event a first reply is filed within
TWO MONTHS of the mailing date of this final action and the advisory action is not
mailed until after the end of the THREE-MONTH shortened statutory period, then the
shortened statutory period will expire on the date the advisory action is mailed, and any
extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of
the advisory action. In no event, however, will the statutory period for reply expire later
than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the
examiner should be directed to Greg Bengzon whose telephone number is (571) 272-
3944. The examiner can normally be reached on Mon. thru Fri. 8 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, William Vaughn can be reached on (571)272-3922. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

 /Greg   Bengzon/
Examiner, Art Unit 2444